

Remarks

Applicants respectfully request reconsideration of the rejection of the claims in view of the remarks set forth below. Claims 1, 3-9, 11, and 13-19 remain in the application. Claims 1, 3, 9, 11, 13, 14, 16 and 19 are amended. Claims 2, 10, 12 and 20 are canceled. Claims 4-8, 15, 17 and 18 remain unchanged.

Claim Objections

Claim 10 was objected to as being dependent on claim 11 instead of claim 9. Claim 10 has been cancelled and the subject matter of claim 10 has been incorporated into claim 9. As a result, Applicants respectfully submit that the objection to claim 10 is obviated.

35 U.S.C. §112

Claims 14 and 15 stand rejected under 35 U.S.C. §112, second paragraph, for not having sufficient antecedent basis for the recited "each of the headers" limitation. Claim 14 is amended to provide sufficient antecedent basis for the recited limitation. Applicants respectfully request reconsideration of the rejection of claims 14 and 15 under 35 U.S.C. §112, second paragraph, in view of the above amendments and remarks.

35 U.S.C. §102

Claims 1-2, 11-12 and 16 stand rejected under 35 U.S.C. §102(e) as being anticipated by Knox et al. (U.S. Patent No. 6,640,238 B1). For a reference to anticipate a claimed invention, each and every element of the claim must be found in the reference.

Claim 1, as amended, requires "A method for displaying a pixmap across...a first raster size in a first displaying mode and a second raster size in a second displaying mode, comprising the steps of...storing a pixmap...large enough to encompass the first and second raster sizes...storing a first header set pointing to a first pixmap region, the first pixmap region fitting the first raster size...storing a second header set pointing to a second pixmap region, the second pixmap region fitting the second raster size...detecting whether a displaying mode is in the first displaying mode or the second displaying mode...using the first header set to display the first

pixmap region when the detected displaying mode is the first displaying mode... and using the second header set to display the second pixmap region when the detected displaying mode is the second displaying mode." Support for the amendment to claim 1 is found in original claim 2 and on pages 11-13 of Applicants' application.

As discussed on pages 1-2 and 12 of Applicants' application, the benefit of "storing a pixmap...large enough to encompass the first and second raster sizes" is that it avoids the waste of memory space and reduction of system speed that may be otherwise encountered by storing multiple pixmaps for multiple raster sizes. Furthermore, the benefit of "storing a first header set pointing to a first pixmap region, the first pixmap region fitting the first raster size" and "storing a second header set pointing to a second pixmap region, the second pixmap region fitting the second raster size" is that once the display mode associated with a raster size is detected the header associated with a pixmap fitting the detected raster size can be selected and processed so the pixmap can be displayed without encountering the header-rewrite delay (discussed on pages 8 and 9 of Applicants' application) that may otherwise be encountered during a conventional OSD retrieval process.

Knox et al. appears to be directed towards a method and apparatus for generating OSD messages (e.g., Closed Captioning) without increasing hardware requirements (e.g., increasing memory or bandwidth) when complicated video frames are received that require additional memory resources to be processed. (Col. 1, lines 56-60; and col. 7, lines 13-21). To this end, Knox et al. discloses a processor 130 that stores an OSD header 210 and associated OSD bit map 220 in a memory 140 and rewrites a top block pointer 240 or a bottom block pointer 242 of the region coordinates 214 of the OSD header 210 to enable or disable a Field Doubling Mode. (Col. 4, lines 1-14; col. 5, line 66 to col. 6, line 10). Alternatively, the processor 130 may rewrite a single bit in the OSD header 210 to enable or disable the Field Doubling Mode. (Col. 7, lines 23-25). When the Field Doubling Mode is disabled (i.e., the top block pointer 240 and bottom block pointer 242 of the header 210 point to different field bit maps), both the top and bottom fields are read from memory to display an OSD region. (Col. 6, lines 23-39) However, when the field doubling mode is enabled (i.e., the top block pointer 240, bottom block pointer 242, or a "field doubling mode" bit of header 210 is rewritten by processor 130 to

cause both pointers 240 and 242 to point to the same field bit map), either the top field or the bottom fields is read from memory 340 and repeated to display the OSD region. (Col. 6, lines 40-51).

Therefore, Knox et al. does not appear to disclose or even suggest "storing a pixmap...large enough to encompass the first and second raster sizes" let alone the "storing a first header set pointing to a first pixmap region, the first pixmap region fitting the first raster size" and "storing a second header set pointing to a second pixmap region, the second pixmap region fitting the second raster size" elements recited in claim 1. Since claim 1 contains at least one element that is missing from Knox et al., Applicants respectfully propose that the rejection for anticipation is overcome.

Independent Claim 11 is amended to include elements similar to the elements of amended independent claim 1 and should therefore be allowable for the same reasons discussed above as well as for the additional recitations contained therein. Therefore, it is respectfully proposed that the rejection for anticipation is overcome.

Dependent claims 16, being dependent on and further limiting independent claim 11, should be allowable for that reason, as well as for the additional recitations that it contains. Therefore, it is respectfully proposed that the rejection for anticipation is overcome.

35 U.S.C. §103

Claims 17 and 18 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Knox et al. Claims 17 and 18 depend from claim 16 that, in turn, depends from independent claim 11. Claims 17 and 18 should therefore be allowable for the same reasons as discussed for claims 11 and 16 as well as for the additional recitations contained therein. Therefore, it is respectfully proposed that the rejection of claims 17 and 18 under 35 U.S.C. § 103(a) is overcome in accordance with the above remarks and notice to that effect is earnestly solicited.

Claims 3-10, 13-15 and 19-20 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Knox et al in view of Min et al. (U.S. Patent No. 6,462,746). Under U.S.C. § 103, the prior art reference (or references when combined) must teach or suggest all of the claim limitations (MPEP § 706:02(j)).

Claims 3-8 depend from claim 1 and should therefore be allowable for the same reasons as discussed for claim 1 as well as for the additional recitations contained therein. Therefore, it is respectfully proposed that the rejection of claims 3-8 under 35 U.S.C. § 103(a) is overcome in accordance with the above remarks and notice to that effect is earnestly solicited.

It is respectfully submitted that claim 9, as amended, is patentably distinguishable from Knox et al. and Min et al. Claim 9, as amended, requires a "method for displaying a pixmap across...a first raster size in a first displaying mode and a second raster size in a second displaying mode, comprising the steps of...storing a pixmap containing a plurality of pixel lines, said pixmap being large enough to encompass the first and second raster sizes...storing a first header set containing one header pointing to a first pixmap region, the first pixmap region fitting the first raster size...storing a second header set containing a plurality of headers pointing to a second pixmap region, the second pixmap region fitting the second raster size...detecting whether a displaying mode is in the first displaying mode or the second displaying mode...using the first header set to display the first pixmap region when the detected displaying mode is the first displaying mode...and using the second header set to display the second pixmap region the detected displaying mode is the second displaying mode." Support for this amendment to claim 9 is found in original claim 10 and on pages 11-13 of Applicants' application.

As discussed above, the benefit of "storing a pixmap...large enough to encompass the first and second raster sizes" is that it avoids the waste of memory space and reduction of system speed that may be otherwise encountered by storing multiple pixmaps for multiple raster sizes. Furthermore, the benefit of "storing a first header set pointing to a first pixmap region, the first pixmap region fitting the first raster size" and "storing a second header set pointing to a second pixmap region, the second pixmap region fitting the second raster size" is that once the display mode associated with a raster size is detected the header associated with a pixmap fitting the detected raster size can be selected and processed so the pixmap can be displayed without encountering the header-rewrite delay (discussed on pages 8 and 9 of Applicants' application) that may otherwise be encountered during a conventional OSD retrieval process.

Knox et al. appears to be directed towards a method and apparatus for generating OSD messages (e.g., Closed Captioning) without increasing hardware requirements (e.g., increasing memory or bandwidth) when complicated video frames are received that require additional memory resources to be processed. (Col. 1, lines 56-60; and col. 7, lines 13-21). To this end, Knox et al. discloses a processor 130 that stores an OSD header 210 and associated OSD bit map 220 in a memory 140 and rewrites a top block pointer 240 or a bottom block pointer 242 of the region coordinates 214 of the OSD header 210 to enable or disable a Field Doubling Mode. (Col. 4, lines 1-14; col. 5, line 66 to col. 6, line 10). Alternatively, the processor 130 may rewrite a single bit in the OSD header 210 to enable or disable the Field Doubling Mode. (Col. 7, lines 23-25). In other words, the Knox et al. OSD management and control arrangement appears to be similar to the conventional arrangement shown in Figs. 3-5 and described on pages 7-9 of Applicants' application. More precisely, Knox et al. appears to teach storing a header and associated pixel map image in memory and rewriting the header to enable or disable a Field Doubling Mode.

In contrast to Knox et al., the present invention, as defined by amended claim 9, recites "storing a pixmap...large enough to encompass the first and second raster sizes", "storing a first header set pointing to a first pixmap region, the first pixmap region fitting the first raster size", and "storing a second header set pointing to a second pixmap region, the second pixmap region fitting the second raster size". These recited elements are important aspects of Applicants' claimed invention since they enable a system using the claimed invention to save memory space by storing a single pixmap that is large enough to encompass multiple raster sizes as opposed to storing multiple pixmaps where each pixmap fits a different raster size. Furthermore, storing multiple headers that point to regions of the pixmap that fit different raster sizes avoids the header rewrite delay that would otherwise occur if data in the header had to be rewritten every time a change in raster size occurred. Not only does Knox et al. not appear to teach these claim limitations, Knox et al. actually appears to teach away from applicants' claimed invention by teaching the storing of a single header and an associated pixmap and the rewriting of the header to change how the pixmap is displayed. Thus it is respectfully

submitted that the present invention, as defined by amended claim 9, is neither taught nor suggested by Knox et al.

Min et al. discloses storing a single global header and an associated pixel map image in a memory. (Col. 7, lns. 33-65). The global header appears to contain the memory location of the entire pixel map. (Col. 7, lns. 54-60; Fig. 8). Min et al. also discloses storing a plurality of local headers where each local header is associated with a different region (i.e., sub pixel map) of the stored pixel map (Col. 7, lns. 33-65). Each local header appears to contain a memory location of a different region within the pixel map. (Col. 7, lns. 40-42 & 60-65; Fig. 9). Using this approach Min et al. teaches a process for displaying a pixel map having regions with different characteristics (e.g., highlights, size, color, and blend ratio). (Col 7, ln. 54 to Col. 8, ln 30; Figs. 7-10). To change a pixel map characteristic using the teachings of Min et al., either data in the global header or data in at least one local header must be changed. In other words, the Min et al. OSD management and control arrangement also appears to be similar to the conventional arrangement shown in Figs. 3, 4 and 5 described on pages 7 and 8 of Applicants' application. More precisely, Min et al. teaches storing a single header and associated pixel map image (e.g., either a single global header and a pixel map or a single local header and a pixel map region) in an OSD section of memory and rewriting display characteristics of the single header to change the desired display of the associated pixel map image.

In contrast to Min et al., the present invention, as defined by amended claim 9, recites "storing a pixmap...large enough to encompass the first and second raster sizes", "storing a first header set pointing to a first pixmap region, the first pixmap region fitting the first raster size", and "storing a second header set pointing to a second pixmap region, the second pixmap region fitting the second raster size". These recited elements are important aspects of Applicants' claimed invention since they enable a system using the claimed invention to save memory space by storing a single pixmap that is large enough to encompass multiple raster sizes as opposed to storing multiple pixmaps where each pixmap fits a different raster size. Furthermore, storing multiple headers that point to regions of the pixmap that fit different raster sizes avoids the header rewrite delay that would otherwise occur if data in the header had to be rewritten every time a change in raster size occurred. Not only does Min et al. not appear to

teach these claim limitations, Min et al. actually appears to teach away from applicants' claimed invention by teaching the storage of a single header and associated pixel map image (e.g., either a single global header and a pixel map or a single local header and a pixel map region) in an OSD section of memory and the rewriting of a display characteristic of the single header to change the desired display of the associated pixel map image. Thus, it is respectfully submitted that the present invention, as defined by amended claim 9, is neither taught nor suggested by Min et al.

As a result, it is respectfully submitted that Knox et al. and Min et al., alone or in combination, do not teach or suggest the "storing a pixmap...large enough to encompass the first and second raster sizes", "storing a first header set pointing to a first pixmap region, the first pixmap region fitting the first raster size", and "storing a second header set pointing to a second pixmap region, the second pixmap region fitting the second raster size" limitations of amended claim 9. Therefore, it is respectfully proposed that the rejection of claim 9 under 35 U.S.C. § 103(a) is overcome in accordance with the above remarks and notice to that effect is earnestly solicited.

Dependent claims 13-15, being dependent on and further limiting independent claim 11, should be allowable for that reason, as well as for the additional recitations that they contain. Therefore, it is respectfully proposed that the rejection of claims 13-15 under 35 U.S.C. § 103(a) is overcome in accordance with the above remarks and notice to that effect is earnestly solicited.

Amended independent claim 19 includes elements similar to the elements of amended independent claim 9 and should therefore be allowable for the same reasons discussed above as well as for the additional recitations contained therein. Therefore, it is respectfully proposed that the rejection of claim 19 under 35 U.S.C. § 103(a) is overcome in accordance with the above remarks and notice to that effect is earnestly solicited.

Having fully addressed the Examiner's rejections it is believed that, in view of the preceding remarks, this application stands in condition for allowance. Accordingly then, reconsideration and allowance are respectfully solicited. If, however, the Examiner is of the opinion that such action cannot be taken, the Examiner is invited to contact the applicants'

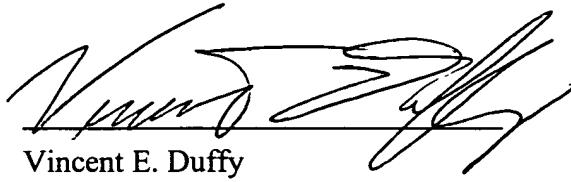
Ser. No. 09/845,959

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attorney at (317) 587-4019, so that a mutually convenient date and time for a telephonic interview may be scheduled.

No fees, other than those discussed above, are believed due. However, if a fee is due, please charge the additional fee to Deposit Account 07-0832.

Respectfully submitted,

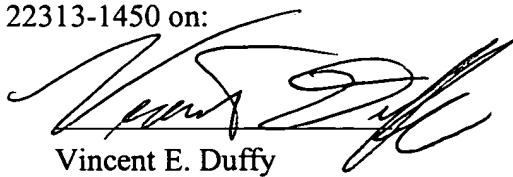
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I hereby certify that this amendment is being deposited with the United States Postal Service as First Class Mail, postage prepaid, in an envelope addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on:

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